



STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
ULUAKUPU BLDG. 4
2385 WAIMANO HOME ROAD, SUITE 110
PEARL CITY, HI 96782-1400

In reply, please refer to:
File: SDWB
WTPO1/Minutes 2-25-20

BOARD OF CERTIFICATION OF PUBLIC WATER SYSTEM OPERATORS
MINUTES OF THE MEETING

DATE: February 25, 2020

TIME: 9:30 a.m. to 11:15 a.m.

LOCATION: Uluakupu Building 4, 2385 Waimano Home Road, Pearl City

MEMBERS PRESENT: Mark Prescott (1st term expires 6/30/20)
Jodi Yamami (1st term expires 6/30/20)
Eric Okazaki (2nd term expires 6/30/21)
Guy Moriguchi (1st term expires 6/30/22)
Glenn Ah Yat (2nd term expires 6/30/23)

A. Call to Order

- The meeting began at 9:30 a.m.

B. Old Business

- The Board unanimously approved the November 26, 2019 meeting minutes.

C. New Business

- DSO Certification Applications
The Board unanimously approved the following applications for certification:

| | Name | Grade Requested | Grade Approved |
|---|------------------------|------------------------|-----------------------|
| 1 | Hannon, Patrick | DSO 1 | DSO 1 |
| 2 | Hawelu-Inanod, Triston | DSO 1 | DSO 1 |
| 3 | Hendershot, Kalei | DSO 1 | DSO 1 |
| 4 | Warren, Joshua | DSO 1 | DSO 1 |
| 5 | Bates, Jeffrey | DSO 2 | DSO 2 |
| 6 | Crutchfield, Michael | DSO 2 | DSO 2 |

For detailed information on the DSO applications, please refer to Attachment 1.

- **WTPO Certification Applications**
The Board unanimously approved the following applications for certification:

| | Name | Grade Requested | Grade Approved |
|---|------------------------|------------------------|-----------------------|
| 1 | Carbonell, Elijah | WTPO 1 | WTPO 1 |
| 2 | Galves-Alameda, Ikaika | WTPO 1 | WTPO 1 |
| 3 | Goto, Kevin | WTPO 1 | WTPO 1 |
| 4 | Moore, Herbert | WTPO 1 | WTPO 1 |
| 5 | Won, Clifton | WTPO 1 | WTPO 1 |
| 6 | Martin, Francis | WTPO 2 | WTPO 2 |
| 7 | Burns, Keska | WTPO 3 | WTPO 3 |
| 8 | Landgraf, Andrew-James | WTPO 4 | WTPO 4 |

For detailed information on the WTPO applications, please refer to Attachment 2.

- **CEU Requests**
The Board unanimously approved the following CEU requests:

| | Course | Date | Sponsor | CEUs Approved |
|---|--|-------------|----------------------------|---|
| 1 | Trenching and Excavation Competent Persons Training | 11/5/19 | Contractor's Assn of Kauai | 0.65 |
| 2 | Risk Assessments, Emergency Response and Resiliency | 11/19/19 | US EPA | 0.1 |
| 3 | Legionella Management and Treatment | 1/28/20 | US EPA | 0.1 |
| 4 | 2020 Pacific Water Annual Pre-Conference (One Water) | 2/4/20 | AWWA Hi./HWEA | 0.075 |
| 5 | 2020 Pacific Water Annual Conference | 2/5-6/20 | AWWA Hi./HWEA | 2.175 total 1.05 possible accumulation |
| 6 | Migrating from ArcMap to ArcGIS Pro | 2/15-16/20 | Esri Training | 1.6 |
| 7 | Drinking Water Tools for | 2/25/20 | US EPA | 0.1 |

| Small Systems | | | | |
|---------------|--|------------|--------------|-------|
| 8 | Risk, Resilience & Cybersecurity in the Water Sector | 2/27/20 | AWWA | 0.45 |
| 9 | Advanced Electrical Troubleshooting | 4/1-2/20 | TPC Training | 1.5 |
| 10 | Understanding & Troubleshooting Hydraulics | 4/16-17/20 | TPC Training | 1.5 |
| 11 | Generators & Emergency Power | 4/22-23/20 | TPC Training | 1.5 |
| 12 | Electric Motors & Motor Control Circuits | 7/13-14/20 | TPC Training | 1.5 |
| 13 | Variable Frequency Drives | 7/22-23/20 | TPC Training | 1.5 |
| 14 | Administration and Public Relations of Distribution System O&M | Repeating | HRWA | 0.4 |
| 15 | Water Audit Wave 3 Workshop | Repeating | CWRM | 0.55 |
| 16 | 1001 Operational Math | Various | Water Otter | 0.2 |
| 17 | 1002 Yippee! More Math | Various | Water Otter | 0.2 |
| 18 | 1003 Can't Get Enough Math | Various | Water Otter | 0.2 |
| 19 | 1004 Let's Review Math | Various | Water Otter | 0.2 |
| 20 | 1006 Avoid a Disaster 1 | Various | Water Otter | 0.1 |
| 21 | 1007 Avoid a Disaster 2 | Various | Water Otter | 0.1 |
| 22 | 1008 Avoid a Disaster 3 | Various | Water Otter | 0.1 |
| 23 | 1018 Microscopes | Various | Water Otter | 0.1 |
| 24 | 1020 Operator Confessions | Various | Water Otter | 0.2 |
| 25 | 1026 The Three Stooges | Various | Water Otter | 0.1 |
| 26 | 1028 Processing Toolbox | Various | Water Otter | 0.1 |
| 27 | 1029 A Few More Tools | Various | Water Otter | 0.075 |
| 28 | 1090 Monitoring Your System | Various | Water Otter | 0.1 |
| 29 | 1098 Temperature 1 | Various | Water Otter | 0.05 |
| 30 | 1099 Temperature 2 | Various | Water Otter | 0.1 |
| 31 | 2011 Disinfection Moves | Various | Water Otter | 0.2 |
| 32 | 2013 Groundwater Operations | Various | Water Otter | 0.2 |
| 33 | 2014 Compare Disinfection | Various | Water Otter | 0.2 |
| 34 | 2016 De-Chlor Errors | Various | Water Otter | 0.2 |
| 35 | 2018 Chloramination | Various | Water Otter | 0.2 |

| | | | | |
|----|---|----------|----------------------------|------|
| 36 | 2019 More Disinfections | Various | Water Otter | 0.2 |
| 37 | 2025 Pump Course Part 1 | Various | Water Otter | 0.1 |
| 38 | 2026 Pump Course Part 2 | Various | Water Otter | 0.1 |
| 39 | 2027 Pump Course Part 3 | Various | Water Otter | 0.15 |
| 40 | 2030 Corrosion Part 1 | Various | Water Otter | 0.1 |
| 41 | 2031 Corrosion Part 2 | Various | Water Otter | 0.1 |
| 42 | 2032 Corrosion Part 3 | Various | Water Otter | 0.1 |
| 43 | Fluid Mechanics | 11/1/20 | Technical Learning College | 2.0 |
| 44 | Civil Design Coordination | 12/2/19 | Carollo Engineering | None |
| 45 | Civil Design Coordination – Offsite Pipelines | 12/2/19 | Carollo Engineering | 0.3 |
| 46 | Construction Site Safety and Health | 11/27/19 | Carollo Engineering | 0.15 |

For detailed information on the CEU requests, please refer to Attachment 3.

- DSO Certification Exam Results

The Board unanimously approved the following results of the DSO certification exam given on January 27, 28, 30, & 31, 2020 in Kona, Maui, Oahu, Kauai, and Molokai. Fourteen out of 32 operators passed for an overall passing rate of 44%.

| | Examinee | Grade | Certification Approved |
|----|--------------------|-------|------------------------|
| 1 | Agtarap, Elmer | 1 | D1-482 |
| 2 | Aki, Harry | 1 | None |
| 3 | Alano, Rodel | 1 | D1-483 |
| 4 | Blue, Christopher | 1 | D1-484 |
| 5 | Cheong, Alan | 1 | None |
| 6 | English, Edward | 1 | None |
| 7 | Kaneshiro, Evan | 1 | None |
| 8 | Len-Wai, Kamuela | 1 | D1-485 |
| 9 | Lima-English, Anoi | 1 | None |
| 10 | Marcelo, Lorenzo | 1 | D1-486 |
| 11 | Motonaga, Logan | 1 | D1-487 |
| 12 | Nerveza, Juan | 1 | D1-488 |
| 13 | Ogawa, Dayne | 1 | D1-489 |

| | | | |
|----|------------------------|---|--------|
| 14 | Parish, Peter | 1 | None |
| 15 | Poentis, Kyle | 1 | D1-490 |
| 16 | Rabago, Troy | 1 | D1-491 |
| 17 | Belanio, Rory | 2 | None |
| 18 | Ellamar, Rory | 2 | None |
| 19 | Kansana, Rhinehardt | 2 | None |
| 20 | Negrillo, Richard | 2 | None |
| 21 | Rita, Selwyn | 2 | None |
| 22 | Robinson, Aaron | 2 | None |
| 23 | Seumalo, Vaai | 2 | None |
| 24 | Victorino, Matthew | 2 | None |
| 25 | Harshell, Wesley | 3 | D3-156 |
| 26 | Naungayan, Darroll | 3 | None |
| 27 | Arakaki, Kevin | 4 | D4-282 |
| 28 | Dudoit, Mervin | 4 | None |
| 29 | Hirata, Ray | 4 | None |
| 30 | Landgraf, Andrew-James | 4 | D4-283 |
| 31 | Maeda, Chris | 4 | D4-284 |
| 32 | Sagon, Herbert | 4 | None |

| DSO Exam Results | | | |
|------------------|-----------|-----------|--------------|
| Grade | Passed | Examinees | Passing Rate |
| DSO 1 | 10 | 16 | 63% |
| DSO 2 | 0 | 8 | 0% |
| DSO 3 | 1 | 2 | 50% |
| DSO 4 | 3 | 6 | 50% |
| Total | 14 | 32 | 44% |

- **WTPO Certification Exam Results**
The Board unanimously approved the following results of the WTPO certification exam given on January 27, 28, 30, & 31, 2020 in Hilo, Kona, Maui, and Oahu. Three out of 13 operators passed for an overall passing rate of 23%.

| | Examinee | Grade | Certification Approved |
|----|-------------------|--------------|-------------------------------|
| 1 | Bamsey, Duncan | 1 | T1-218 |
| 2 | Cabatingan, Ian | 1 | None |
| 3 | Echallas, Roland | 1 | None |
| 4 | Gottlieb, Bonnie | 1 | None |
| 5 | Kamanu, Blane | 1 | None |
| 6 | Martinez, Daniel | 1 | T1-219 |
| 7 | Oducado, Justin | 1 | None |
| 8 | Padilla, Lawrence | 1 | None |
| 9 | Rodrigues, Frank | 1 | T1-220 |
| 10 | Paman, Daniel | 2 | None |
| 11 | Hooks, Ash | 4 | None |
| 12 | Pennington, Lisa | 4 | None |
| 13 | Wong, Brandon | 4 | None |

| WTPO Exam Results | | | |
|--------------------------|---------------|------------------|---------------------|
| Grade | Passed | Examinees | Passing Rate |
| WTPO 1 | 3 | 9 | 33% |
| WTPO 2 | 0 | 1 | 0% |
| WTPO 3 | -- | -- | -- |
| WTPO 4 | 0 | 3 | 0% |
| Total | 3 | 13 | 23% |

- CEU Records at the 2020 Annual Pacific Water Conference
The Board reviewed the issue of two certified operators, Everett Arquero and Ryan Oda, possibly falsifying their CEU record at the 2020 Annual Pacific Water Conference held on February 5-6, 2020.

The Operator's CEU Cards, which records attendance with stamps in and out of sessions, were stamped with the same unique "bicycle" stamp for the entire day of Thursday, February 6. In discussions with the Technical Program Committee of the Conference, there was only one "bicycle" stamp, and it was utilized in only one of the six possible rooms for technical sessions. The

Operator's CEU Cards show the "bicycle" stamp recorded in three different rooms throughout the day.

The Technical Program Committee of the Conference assigns Assistant Moderators the task of stamping CEU Cards at the beginning and at the end of each session for those in attendance. The Assistant Moderators did not give permission to the Operators to stamp their CEU Cards in that manner. However, there are some instances when Assistant Moderators could leave the room for a break and the stamp be left unattended in the room.

Both Operators were asked if they had attended the full day of sessions on Thursday of the Conference. Both said they attended the full day and their CEU Cards were stamped by the people in the back of the room after each session.

Although the Operators claim they attended the full day of the Conference on Thursday, the Board unanimously decided that there is ample evidence suggesting that the Operator's CEU Cards have been falsified, and the Operators should not receive CEU credit for the entire day of February 6, 2020 of the 2020 Annual Pacific Water Conference.

Also, per Hawaii Administrative Rules, Chapter 11-25, Rules Relating to Certification of Public Water System Operators, the Board may revoke, suspend, or refuse to renew the certification of an operator when it is found that the operator has practiced fraud or deceit in obtaining certification. The Board unanimously decided that the Operator's certifications will no longer be valid, and the Board will refuse to renew the Operator's certifications. However, it was also decided that after a period of one year, the Operators will be allowed to apply for and if approved, take an examination for re-certification, if so desired.

The Board's rationale for deciding to refuse to renew certification was based on the fact that excusing this offense could not be justified and it deserved some disciplinary action. However, the offense was not the most severe to deserve a revoked certification that could never be reinstated. And suspending certifications for a period of time would not result in consistent disciplinary actions between the two operators because they are on different certification cycles.

Both Operators obtained their initial certification in 2006 and 2007 when it was required for their job position. Both Operators have since moved to a different division, and their current duties do not require the certification. Therefore, there is no operator certification violation for any water system.

The Board also decided that there needs to be more control of the stamps to

ensure the credibility of the CEU record. The Board will request the Technical Program Committee and Conference Chairs to determine a more secure procedure in recording attendance for CEU credit for subsequent conferences.

D. Announcements

- The next board meeting is scheduled for May 26, 2020.

E. Adjournment

- The meeting adjourned at 11:15 a.m.

Respectfully Submitted,



Jodi Yamami
Board of Certification of
Public Water System Operators

JY:aeH

- c: Anna Yen, U.S. EPA Region IX [via yen.anna@epa.gov only]
Kevin Ryan, U.S. EPA Region IX [via ryan.kevin@epa.gov only]
Glenn AhYat, Board Member [via gahyat@hbws.org only]
Guy Moriguchi, Board Member [via guy@aquaeengineers.com only]
Eric Okazaki, Board Member [via eric.okazaki@co.maui.hi.us only]
Mark Prescott, Board Member [via mprescott90@gmail.com only]

ATTACHMENT 1
DSO DECISIONS
2-25-2020

- | | | |
|--|---|--|
| <p>1 Hannon, Patrick K. Grade 1 214 Lahaina Supervisor Dave Haddock WTPO 1 yr/9 mos</p> | <p>209 Olowalu Supervisor Dave Minami Water System Operator 1 yr/4 mos</p> | <p style="text-align: right;">Approve Grade 1</p> <p>Monitor Cl2 and chemical additives for adjustment due to fluctuating conditions from raw intake, take daily numbers and input data for record management, change and repair of various valves and distribution piping (once per month)</p> <ul style="list-style-type: none"> • WTPO Grade 2 certified <p>Operate water system for subdivisions by monitoring and manipulating Cl2 content based on well pump output, perform daily testing and data entry for conductivity from wells, output from wells, usage and visual reports, order, construct and operate chlorination system for Haiku Town Acres</p> |
| <p>2 Hawelu-Inanod, Triston Grade 1 428 Princeville Supervisor Rowland Wong Operator 1 yr/2 mos</p> | | <p style="text-align: right;">Approve Grade 1</p> <p>Handle and transport chlorine, read water meters, water sampling, check chlorine residual, replace water meters, repair water service laterals, repair water mains, daily checks at well sites, troubleshoot chemical feed pumps, record well pump run times, monitor SCADA, check water pressure, service fire hydrants, locate utilities for Hawaii One Call, respond to emergencies</p> |
| <p>3 Hendershot, Kalei W. Grade 1 205 Kaanapali Supervisor Efren Ugalino Utility Worker 1 yr</p> | | <p style="text-align: right;">Approve Grade 1</p> <p>Daily checks and troubleshooting on the system, ensure all tank levels are normal, wells operating properly and chlorine residuals are in the appropriate range, adjusting the rate of injection at chlorination stations if needed, conduct hydrant maintenance, including operating both hydrant valves and street valves to ensure they operate correctly and that the pressure is appropriate, leak checks, meter reads, install/replace meters, routine sampling for total coliform, EDB/DBCP, weekly water quality samples from well sites, and sampling from GAC filters</p> |
| <p>4 Warren, Joshua Grade 1 331 Honolulu-Windward-Pearl Harbor Supervisor Bert Kawamura Water Plant Maintenance Mechanic 1 yr/2 mos</p> | | <p style="text-align: right;">Approve Grade 1</p> <p>Day to day work includes the maintenance and repair of various pump station equipment, including pumping unit, motor control cabinets, and chlorination units</p> |
| <p>5 Bates, Jeffrey W. Grade 2 Private Subdivisions off DWS Hawaii Supervisor John Santangelo Operator 2 yrs/7 mos</p> | | <p style="text-align: right;">Approve Grade 2</p> <p>Check system daily, chlorine residual testing bi-weekly, install and replace defective water meters, maintain PRVs, check and exercise system gate valves, repair minor leaks, chlorination if needed, check and flush hydrants, maintain centrifugal feed pumps and positive displacement feed pumps, corrosion maintenance of all valves and PRVs</p> |

ATTACHMENT 1
DSO DECISIONS
2-25-2020

6 **Crutchfield, Michael A. Grade 2**

Approve Grade 2

423 Kealia
Supervisor Ann Sokei
Operator
2 yrs/11 mos

Daily and routine checks of well pumps/tank, chlorine residual reading and recording, equipment readings, trending pump run times and flow totals to determine proper equipment operations, checks in the distribution system, flushing throughout the system, troubleshooting various forms if issues and responding in a timely manner, documenting repairs and maintenance, inspecting and maintaining equipment routinely to ensure longevity and reliability, maintaining proper chlorine residual, routine water quality monitoring, sampling and documentation

- DSO Grade 1 and WTPO Grade 2 certified

ATTACHMENT 2
WTPO DECISIONS
2-25-2020

- | | |
|---|--|
| 1 Carbonell, Elijah Grade 1 331 Honolulu-Windward-Pearl Harbor Chlorination, GAC Supervisor Pekelo Martin 3 yrs/10 mos | Approve Grade 1 Chlorination unit maintenance, checks, and repairs, GAC carbon replacement and vessel maintenance <ul style="list-style-type: none">• DSO Grade 1 certified |
| 2 Galves-Alameda, Ikaika Grade 1 331 Honolulu-Windward-Pearl Harbor Chlorination, GAC Supervisor Pekelo Martin 2 yrs/6 mos | Approve Grade 1 Chlorination unit maintenance, checks, and repairs, GAC carbon replacement and vessel maintenance <ul style="list-style-type: none">• DSO Grade 1 certified |
| 3 Goto, Kevin Grade 1 331 Honolulu-Windward-Pearl Harbor Chlorination Supervisor Mark Fujimoto 16 yrs | Approve Grade 1 Collect water samples from sampling points around pumping station, using a colorimeter, test chlorine residual and adjust dosing accordingly, when sodium hypochlorite tank needs to be filled, calculate appropriate concentration to be added to tank where consumption will be maximized before the solution starts to degrade <ul style="list-style-type: none">• DSO Grade 4 certified |
| 4 Moore, Herbert Grade 1 335 Waipahu-Ewa-Waianae Chlorination, GAC Supervisor Paul Rokero 8 yrs | Approve Grade 1 Work includes collection of water samples from sampling points located around pumping station, use of a meter to test chlorine residual, adjusting injection pumps and refilling sodium hypochlorite tanks, GAC duties include turning valves to place vessels in service, flush GAC vessels and drain backwash tank following proper procedures <ul style="list-style-type: none">• DSO Grade 1 certified |
| 5 Won, Clifton Grade 1 335 Waipahu-Ewa-Waianae Chlorination, GAC Supervisor Paul Rokero 7 yrs/10 mos | Approve Grade 1 Work includes collection of water samples from sampling points located around pumping station, use of a meter to test chlorine residual, adjusting injection pumps and refilling sodium hypochlorite tanks, GAC duties include turning valves to place vessels in service, flush GAC vessels and drain backwash tank following proper procedures <ul style="list-style-type: none">• DSO Grade 1 certified |
| 6 Martin, Francis K. Grade 2 247 Lower Kula Direct Filtration (Piipholo) Supervisor Marvin Ignacio 3 yrs/5 mos | Approve Grade 2 Responsible for periodic service/maintenance and any repair or replacement of equipment at water treatment plants, repair pumps, pipelines, chemical mixers, modify vent covers for clearwells, repair backwash sprayer for sediment filters, pin memcor filters, assist in troubleshooting memcor filters and chlorination pumps, adjust chlorine, assist with figuring out dosages |

ATTACHMENT 2
WTPO DECISIONS
2-25-2020

- | | |
|---|--|
| <p>7 Burns, Keska W. Grade 3 130 South Kohala Conventional Treatment (Waimea) Supervisor Anthony Tanodra 3 yrs/9 mos (includes 1600+ hours at Class 4 plant)</p> | <p style="text-align: right;">Approve Grade 3</p> <p>Operate Grade 2 Microfiltration Plant, perform maintenance and cleans on system membranes, repair, replace, monitor plant equipment including valves, blowers, compressors, chemical pumps etc., add and change chemicals, evaluate, update and change chemical dosing parameters regarding filters chemical cleaning system's needs, take laboratory readings of system water samples, including, color, turbidity, chlorine and orthophosphate residuals, determine plant dosing based on results and system needs, monitor Grade 4 Conventional Treatment Plant procedures, including, polymer addition/coagulation, flocculation and sedimentation before entry into plant, monitor pH levels and corrosion inhibitors, add chemicals accordingly, at several off site locations using surface water intakes</p> <ul style="list-style-type: none">• WTPO Grade 2 and DSO Grade 1 certified |
| <p>8 Landgraf, Andrew-James W. Grade 4 247 Lower Kula Direct Filtration (Piihola) Supervisor Marvin Ignacio 1 yr/9 mos</p> | <p style="text-align: right;">Approve Grade 4</p> <p>Backwash filters, check pumps, perform jar testing, gather daily check data (turbidity, clear well heights), adjust plant set points, adjust dosages, refill chemicals (ACH), raw water intake control, coagulation, flocculation, sedimentation, filtration, sedimentation, continuous microfiltration (membrane), chlorination or chloramination, feed water pumps, chemical pumps, booster pumps, air delivery systems, air blower systems, water sampling and laboratory analysis, CT calculations, instrumentation setup and calibration, valve repair and replacement, membrane repair and replacement, chlorinators and ammoniators, and various water treatment processes and equipment</p> <ul style="list-style-type: none">• WTPO Grade 2 and DSO Grade 4 certified |
| <p>Pural Systems Maui/Oahu Membrane Filtration, Chlorination, GAC Supervisor James Landgraf/Kalani Kamanu 4 yrs/9 mos</p> | <p>Performed water sampling and testing, chlorine feed adjustment, chlorine system maintenance and repair, flow control and tank monitoring, waterline installation and repair, booster pump servicing, surface water filtration for potable water use, membrane filtration, GAC filtration, chlorination and disinfection on waterlines and tanks, live water line tapping</p> |

ATTACHMENT 3
CEU DECISIONS
2-25-2020

Hawaii Courses

- 1 Trenching and Excavation Competent Persons Training**
11/5/19 This course covers proper methods for safe trench excavations which
Contractors Association of emphasizes soil conditions, shoring, sloping, benching requirements as related
Kauai to OSHA requirements. Field demonstrations will also be included.
Lihue
6.5 Contact Hours
0.65 CEUs
- 2 Risk Assessments, Emergency Response and Resiliency**
11/19/19 This webinar highlights EPA tools to assist drinking water utilities in conducting
US EPA risk assessments and developing emergency response plans required by Section
Webinar 2013 of America's Water Infrastructure Act.
1.0 Contact Hours
0.1 CEUs
- 3 Legionella Management and Treatment**
1/28/20 This presentation highlights EPA's efforts to reduce Legionella risks through
US EPA regulatory revisions, treatment technologies and research on plumbing. An
Webinar overview of public health impacts, challenges to addressing Legionella in
1.0 Contact Hours drinking water and potential risk factors in municipal supplies was included. An
0.1 CEUs investigation on the influence of disinfectant type and total chlorine residual on
was also reviewed.
- 4 2020 Pacific Water Annual Pre-Conference (One Water)**
2/4/20 Topics included:
AWWA Hi/HWEA
 - Climate Perspectives from Miami, Charleston, and Boston
 - One Water Framework for Honolulu
 - One Water Cities: Ideas and Lessons Learned
 - One Water in Central Oahu
 - *Case Studies in Centralized and Decentralized Potable Reuse
 - Non-Potable Reuse – Getting Squeezed Out in Favor of Potable Reuse?
 - Pure Water Monterey: First Indirect Potable Reuse
 - Opportunities for Expansion of Water Reuse in Hawaii
Honolulu
6.0 Contact Hours
0.075 CEUs
 - * items for CEU credit

ATTACHMENT 3
CEU DECISIONS
2-25-2020

- 5 **2020 Pacific Water Annual Conference**
2/5-6/20 Update from 11/26/19 Board Meeting
AWWA Hi/HWEA • Regulatory Update on Lead in Drinking Water will take the place of
Honolulu DWSRF Private Loans for CEU credit
60.75 Contact Hours
2.175 CEUs overall (29 sessions @ 0.75 contact hours each)
1.05 CEUs total possible due to overlapping sessions
- 6 **Migrating from ArcMap to ArcGIS Pro**
2/15-16/20 This course prepares ArcMap users to be productive right away. The essential
Esri Training Arc GIS Pro terminology and concepts will be taught along with how to
Honolulu efficiently complete a variety of tasks related to mapping, editing, analyzing, and
16.0 Contact Hours sharing geospatial data and resources.
1.6 CEUs
- 7 **Drinking Water Tools for Small Systems**
2/25/20 This presentation will highlight three drinking water tools for small systems:
US EPA EPAs Online Drinking Water Training System which is an online training system
Webinar that provides an overview of the national primary drinking water regulations,
1.0 Contact Hours EPA's Water Operator Hiring and Contracting Guide which helps communities
0.1 CEUs identify and recruit qualified personnel to meet their workforce needs, and
EPA's iWRiter tool which is designed to help water suppliers create their CCRs
according to the requirements for report content, format and distribution.
- 8 **Risk, Resilience & Cybersecurity in the Water Sector**
2/27/20 This workshop will provide participants with and in-depth understanding of
AWWA America's Water Infrastructure Act of 2018 and resources designed to facilitate
Honolulu compliance. Participants will also be provided with a focused review of practical
4.5 Contact Hours cybersecurity protocols that can be applied by utility operators to enhance cyber
0.45 CEUs risk management, including a review of how to use AWWA's cybersecurity
guidance and assessment tool.
- 9 **Advanced Electrical Troubleshooting**
4/1-2/20 Hands-on lab activities on understanding complex controls and control circuits
TPC Training are the focus of this course. Participants will troubleshoot on a large variety of
Honolulu system components, ranging from forward/reversing motor control circuits to
15 Contact Hours proximity switches and float switches.
1.5 CEUs

ATTACHMENT 3
CEU DECISIONS
2-25-2020

- 10 **Understanding & Troubleshooting Hydraulics**
4/16-17/20 This hydraulic repair and troubleshooting seminar provides the basic building blocks and knowledge needed to be proficient working with industrial hydraulics and fluid power. The how and why of all the various components in hydraulic equipment will be discussed.
TPC Training
Honolulu
15 Contact Hours
1.5 CEUs
- 11 **Generators & Emergency Power**
4/22-23/20 Students will learn how to select, install, operate, and maintain generators, as well as how to isolate and repair generator problems. This course can help companies avoid the disastrous consequences of power failure and ensure that facilities continue running even when the electricity doesn't.
TPC Training
Honolulu
15 Contact Hours
1.5 CEUs
- 12 **Electrical Motors & Motor Control**
7/13-14/20 The course proceeds from a thorough overview of motor basics to replacement procedures and fundamental motor maintenance techniques. Then basic and specialized motor control circuits will be covered. The course is designed to help students reduce downtime and expense caused by motor failure and increase the overall efficiency of their facility.
TPC Training
Honolulu
15 Contact Hours
1.5 CEUs
- 13 **Variable Frequency Drives**
7/22-23/20 Students will learn how to improve VFD control and efficiency, troubleshoot and fix VFDs, reduce equipment downtime, and eliminate chronic VFD problems. Students will perform hands-on activities (input motor data, set parameters for speed control and overcurrent protection, and check fault codes) with real-life VFDs.
TPC Training
Honolulu
15 Contact Hours
1.5 CEUs

Repeating Courses

- 14 **Administration and Public Relations of Distribution System O & M**
Repeating Topics include:
HRWA • Planning
4.0 Contact Hours • Organization
0.4 CEUs • Staffing
 • Communications
 • Public Relations
 • Public Speaking
 • Consumer Inquiries

ATTACHMENT 3
CEU DECISIONS
2-25-2020

15 **Water Audit Wave 3 Workshop**

Repeating

CWRM

5.5 Contact Hours

0.55 CEUs

Topics include:

- AWWA Water Auditing Review
- Wave 2 Expected Outcomes
- Wave 4 Planning
- System Input Meter Testing
- Leak Detection Practical Guidance
- Customer Meter Testing
- Pressure Management
- Advanced Loss Monitoring

Correspondence/Online Courses

16 **1001 Operational Math**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Operations into Calculations
- Purity as a Decimal
- Apples to Apples
- Review and Applications

17 **1002 Yippee! More Math**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Conversion Skills
- Calculating Area and Volume

18 **1003 Can't Get Enough Math**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Calculating Gallons and Pounds
- Calculating Concentration and Dose
- Detention Time

19 **1004 Let's Review Math**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Calculating Flow and Velocity
- Course Pack Review Problem Solving

20 **1006 Avoid a Disaster 1**

Online

Water Otter

1.0 Contact Hours

0.1 CEUs

Topics include:

- Disaster Definition, DPD Chlorine Testing, Ammonia
- System Checks, Inspections, Water Stagnation, Biofilm

ATTACHMENT 3
CEU DECISIONS
2-25-2020

21 **1007 Avoid a Disaster 2**

Online

Water Otter

1.0 Contact Hours

0.1 CEUs

Topics include:

- Biofilm Issues
- Cross Connections and Verifications

22 **1008 Avoid a Disaster 3**

Online

Water Otter

1.0 Contact Hours

0.1 CEUs

Topics include:

- Sodium Hypochlorite Handling
- Dry Tablets and Chlorine

23 **1018 Microscopes**

Online

Water Otter

2.0 Contact Hours

0.1 CEUs

Topics include:

- Microscope Features and Benefits
- Better Features = Better Results
- Let's Talk Sampling
- Organism Class ID
- Topics cover both water and wastewater examples therefore ½ credit for water content only

24 **1020 Operator Confessions**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Lifting the Veil on Chemical Feed
- Chemical Strength Never Changes
- Delivered Chemicals are Exactly as Specified
- Do it Right

25 **1026 The Three Stooges**

Online

Water Otter

2.0 Contact Hours

0.1 CEUs

Topics include:

- pH and Meters
- Employing Testing Apparatus
- DO Testing Apparatus
- Operations and Reporting
- Topics cover both water and wastewater examples therefore ½ credit for water content only

ATTACHMENT 3
CEU DECISIONS
2-25-2020

- 26 **1028 Processing Toolbox**
Online
Water Otter
2.0 Contact Hours
0.1 CEUs
- Topics include:
- Let the Secrets Begin
 - How About a Disinfection
 - Oxidation Reduction Potential
 - Topics cover both water and wastewater examples therefore ½ credit for water content only
- 27 **1029 A Few More Tools**
Online
Water Otter
1.5 Contact Hours
0.075 CEUs
- Topics include:
- Phosphorus Removal
 - Chlorine and Alkalinity
 - Hydrant Adapters, Temperature and Jar Testing
 - Topics cover both water and wastewater examples therefore ½ credit for water content only
- 28 **1090 Monitoring Your System**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- Low Cost Continuous Distribution System Monitoring
 - Early Warning Monitoring for Health & Security
- 29 **1098 Temperature 1**
Online
Water Otter
1.0 Contact Hours
0.05 CEUs
- Topics include:
- Hypochlorite
 - Langelier Index and Nitrification
 - Topics cover both water and wastewater examples therefore ½ credit for water content only
- 30 **1099 Temperature 2**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- UV
 - Thermometers and Other Tools
- 31 **2011 Disinfection Moves**
Online
Water Otter
2.0 Contact Hours
0.2 CEUs
- Topics include:
- UV Disinfection Techniques
 - Lo-Dose UV
 - UV, How Does it Differ
 - Is There an Alternative to Chlorine

ATTACHMENT 3
CEU DECISIONS
2-25-2020

32 **2013 Groundwater Operations**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Let's Talk Basics
- From Design to Distribution
- General Rules and Regulations
- Reporting

33 **2014 Compare Disinfection**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Pros and Cons of Chlorine
- Disinfection Systems
- What Works Best
- Disinfection By-Products and Up and Coming Groundwater Rules

34 **2016 De-Chlor Errors**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Common Mistakes using Hypochlorite
- High vs. Low Strength Hypochlorite
- Measuring Delivery Doses
- Dose Calculations and Safety

35 **2018 Chloramination**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Primary Disinfection
- Making Chloramination Work
- Residual Based Measurements
- Customer Concerns & Addressing Problems

36 **2019 More Disinfections**

Online

Water Otter

2.0 Contact Hours

0.2 CEUs

Topics include:

- Pros and Cons at Chloramines
- Ozone and the UV
- UV and its Core
- Ultrafiltration

37 **2025 Pump Course Part 1**

Online

Water Otter

1.0 Contact Hours

0.1 CEUs

Topics include:

- Pump Basics
- Pump Types and Applications

ATTACHMENT 3
CEU DECISIONS
2-25-2020

- 38 **2026 Pump Course Part 2**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- Pump Transfer and Process
 - Pressure Maintaining, Flow Pace, Chemical Dosing
- 39 **2027 Pump Course Part 3**
Online
Water Otter
1.5 Contact Hours
0.15 CEUs
- Topics include:
- Pumps and Seals
 - Pump Material Selection
 - Instrumentation and Controls
- 40 **2030 Corrosion Part 1**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- What is Corrosion
 - Copper and Flushing
- 41 **2031 Corrosion Part 2**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- Flushing and pH
 - Alkalinity and Testing
- 42 **2032 Corrosion Part 3**
Online
Water Otter
1.0 Contact Hours
0.1 CEUs
- Topics include:
- TDS, Langelier, and Phosphorous
 - Cost Examples
- 43 **Fluid Mechanics**
Corr.
Technical Learning College
20.0 Contact Hours
2.0 CEUs
- This course will review the science of water in motion, hydraulic fundamentals and principles. The student will understand and describe various engineering science laws and theories pertaining to fluid (water) mechanics, hydraulics, liquid pressure, force, friction and flow.

ATTACHMENT 3
CEU DECISIONS
2-25-2020

Mainland Courses

44 Civil Design Coordination

Carollo Engineering
California
1.0 Contact Hours
No CEUs

This course focuses on the hundreds of points of coordination where the civil engineer requires very specific input and support from the client, project manager, other engineering disciplines, utilities and sub-consultants when working on plant site projects.

Topics include:

- Civil Engineer Roles and Responsibilities
- Conceptual Design Planning
- Civil Checklists
- Subconsultants
- Final Design Phases

Topic is too general, therefore, recommend no CEUs. The course below (Civil Design Coordination – Offsite Pipelines) is more specific to work on a distribution system.

45 Civil Design Coordination – Offsite Pipelines

Carollo Engineering
California
3.0 Contact Hours
0.3 CEUs

This course focuses on the unique requirements of the Civil Engineer when working on offsite pipeline projects. The course follows the Pipeline Design Flowchart and details requirements in each phase of the process.

Topics include:

- Below Ground Factors
- Above Ground Factors
- Pipeline Design Flowchart
- Offsite Pipeline Information & Coordination
- Inter-Disciplinary Information & Coordination

46 Construction Site Safety and Health

Carollo Engineering
California
1.5 Contact Hours
0.15 CEUs

Topics include:

- Safety and Health Program Purpose
- Emergency Plans & Hazard Communication Program
- Safe Work Practices